

Listing of the Claims:

1 1. (Original) A circuit providing constant average current, said circuit comprising:
2 a full-wave bridge rectifier providing a rectified DC power output;
3 a micro-controller for monitoring a component of said rectified DC power,
4 evaluating said monitored component and providing an output signal in response to said
5 evaluation of said monitored component;
6 an output switch operating in response to said output signal for selectively
7 providing said rectified DC power at a constant average current to an electrical device
8 connected electrically in series with said full-wave bridge rectifier and said output switch.

1 2. (Original) The circuit of claim 1, wherein said monitored component of the
2 rectified DC power is the voltage.

1 3. (Original) The circuit of claim 1, wherein said monitored component is
2 evaluated with respect to a setpoint measured in volt-seconds.

1 4. (Original) The circuit of claim 1, wherein said constant average current is
2 obtained by applying constant volt-seconds to said electrical device.

1 5. (Original) The circuit of claim 1, wherein said monitoring, evaluating and
2 providing said output signal are concurrent operations initiated by a trigger.

1 6. (Original) The circuit of claim 5, wherein said trigger is a regularly spaced
2 event determined by said micro-controller.

1 7. (Original) An open loop voltage sag compensator circuit comprising:
2 a full-wave bridge rectifier providing a rectified DC power output;
3 a micro-controller for monitoring a component of said rectified DC power at
4 evenly spaced intervals, evaluating said monitored component with respect to a setpoint

5 and providing an output signal in response to said evaluation of said monitored
6 component;
7 an output switch operating in response to said output signal for selectively
8 providing said rectified DC power at a constant average current to an electrical device
9 connected electrically in series with said full-wave bridge rectifier and said output switch.

1 8. (Original) The voltage sag compensation circuit of claim 7, wherein said
2 monitored component of the rectified DC power is the voltage.

1 9. (Original) The voltage sag compensation circuit of claim 7, wherein said
2 setpoint is measured in volt-seconds.

1 10. (Original) The voltage sag compensation circuit of claim 7, wherein said
2 constant average current is obtained by applying constant volt-seconds to said electrical
3 device.

1 11. (Original) The voltage sag compensation circuit of claim 7, wherein said
2 monitoring, evaluating and providing said output signal are concurrent operations
3 initiated by a trigger and occurring during a trigger period.

1 12. (Original) The voltage sag compensation circuit of claim 11, wherein said
2 trigger is a regularly spaced event determined by said micro-controller and said trigger
3 period is the interval between triggers.

1 13. (Original) The voltage sag compensation circuit of claim 12, wherein said
2 setpoint is determined by said trigger period and a particular electrical current level
3 required to maintain said electrical device in a desired operating condition.

1 14. (Original) The voltage sag compensation circuit of claim 7, wherein said
2 micro-controller continuously evaluates said monitored component with respect to a
3 dropout setpoint.

1 15. (Original) The voltage sag compensation circuit of claim 14, wherein said
2 micro-controller initiates an output signal placing said electrical device in a dropout
3 condition and enters a sleep mode for a predetermined period of time if said monitored
4 component drops below said dropout setpoint.

1 16. (Original) The voltage sag compensation circuit of claim 15, wherein said
2 micro-controller wakes up after said predetermined period of time and if said monitored
3 component is above said dropout setpoint initiates said evaluating of said monitored
4 component with respect to said setpoint and providing said output signal to said output
5 switch for providing said constant average current to said electrical device.

1 17. (Original) The voltage sag compensation circuit of claim 15, wherein said
2 micro-controller wakes up after said predetermined period of time and if said monitored
3 component is below said dropout setpoint terminates further monitoring of said
4 monitored component thereby maintaining said electrical device in said dropout
5 condition.
6 by said micro-controller.

1 21. (New) An open loop voltage sag compensator circuit comprising:
2 a full-wave bridge rectifier providing a rectified DC power output from an AC
3 line input;
4 a micro-controller for monitoring a component of said rectified DC power at
5 evenly spaced intervals determined by said micro-controller, evaluating said monitored
6 component with respect to a setpoint at each said evenly spaced interval and providing at
7 least one output signal in response to said evaluation of said monitored component per
8 each said evenly spaced interval in real time;
9 an output switch operating in response to said output signal for selectively
10 providing said rectified DC power at a constant average current to an inductive device
11 connected electrically in series with said full-wave bridge rectifier and said output switch.

1 22. (New) The voltage sag compensation circuit of claim 21, wherein said
2 monitored component of the rectified DC power is the voltage.

1 23. (New) The voltage sag compensation circuit of claim 21, wherein said
2 setpoint is measured in volt-seconds.

1 24. (New) The voltage sag compensation circuit of claim 21, wherein said
2 constant average current is obtained by applying constant volt-seconds to said inductive
3 device.